Fact Sheet

National Institute of Biomedical Imaging and Bioengineering

DIVISION OF DISCOVERY SCIENCE & TECHNOLOGY

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Introduction

The mission of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) is to improve health by leading the development and accelerating the application of biomedical technologies. As the newest component of the National Institutes of Health, NIBIB is committed to integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.

The Division of Discovery Science and Technology is part of the Office of Extramural Science Programs within the NIBIB. Through grant and contract mechanisms, the Division promotes, fosters, and manages basic bioengineering and biomedical imaging research and development programs involving novel technologies that can be applied to biomedical research and medical practice, with the ultimate goal of improving public health.

Current Research

The Division currently funds a research portfolio rich in areas such as advanced biomaterials, tissue engineering, medical devices and implant science, nanotechnology, surgical tools and techniques, high-throughput analytical platform technologies, biosensors, therapeutic agent delivery systems and devices, neuroprosthesis, biomechanics, rehabilitation engineering, telehealth, molecular probes, robotics, modeling, bioinformatics, and imaging devices, agents, and modalities.

Funding Opportunities

The NIBIB supports a coordinated program of research and research training that can be applied across a broad spectrum of biological processes, disorders, and diseases. Potential applicants for NIBIB grants are strongly encouraged to discuss their proposed projects with the scientific staff of the Institute prior to preparing an application. Individuals can obtain guidance on the suitability of the project and the most appropriate funding mechanism or opportunity for the proposed research.

The Institute supports research through a variety of NIH grant mechanisms such as:

- ***R01*** - Research project grant to support investigator-initiated research projects;
- ***R03*** – Research grant to support projects requiring small amounts of funding for limited periods of time;
- ***R13*** – Conference grant to support high-quality scientific meetings, conferences, and workshops;
- ***R21*** – Exploratory and development grant to support projects that explore novel concepts;
- ***R43/R44 and R41/R42*** – Small Business Innovation Research and Small Business Technology Transfer awards that support exploration of ideas that may ultimately lead to commercial products or services; and
- ***P41*** – Research grant to support biotechnology resources.

Specific areas of scientific interest are publicized through program announcements (PA) and requests for applications (RFA). Additional information on current opportunities available at the NIBIB can be found by searching the Funding Opportunities Database on the NIBIB website at: http://www.nibib.nih.gov/publicPage.cfm?Section=funding&Action=Search.

Collaborations

An important aspect of the Institute's mission is encouraging collaborations between the Institutes and Centers at NIH, other Federal

agencies, and the private sector. The Division is currently involved in several important collaborative activities:

- ***Multi-Agency Tissue Engineering Sciences (MATES) Working Group*** – The MATES group strives to facilitate communication across departments/agencies by conducting regular information exchanges and maintaining a common website to report activities across the various Federal agencies. In addition, the group co-sponsors scientific meetings and workshops, facilitates the development of standards, monitors technology in the field, and provides support for tissue engineering research through the Interagency Announcement of Opportunities in Tissue Engineering. Partners include NIST, DOE, DARPA, FDA, NIH, NASA, and NSF.
- ***Biomaterials and Medical Implant Science (BMIS) Coordinating Committee*** – The BMIS committee serves as a trans-agency technical group charged with coordinating research programs and developing joint initiatives and workshops in biomaterials and medical implant science. The committee includes representatives from Federal agencies and public organizations including NIH, NIST, NSF, FDA, and AdvaMed.
- ***Roundtable on Biomedical Engineering Materials and Applications (BEMA)*** – The objectives of the BEMA Roundtable are to provide a neutral setting for the exchange of information regarding biomaterials science, research, and practice. BEMA identifies and discusses priority issues in the general areas of biomaterials and their use in the development, manufacture, and application of medical devices. BEMA also conducts problem-solving and issue identification activities such as workshops. Members include industry, academia, and Federal agencies including NIH, FDA, NIST, ONR, and the VA.
- ***Interagency Modeling and Analysis Group (IMAG)*** – IMAG holds a monthly forum for program officers across agencies to communicate, disseminate, and plan collaborative activities and joint initiatives related to computational and analytical modeling and analysis. IMAG currently has participants from 14 NIH components, 4 NSF directorates, DARPA, TATRC, NASA, DOE, and USDA.
- ***Neuroprosthesis Group (NPG)*** – NPG holds a monthly forum for program officers across NIH to communicate, disseminate, and plan collaborative activities related to neuroprosthesis. NPG currently has participants from NIBIB, NINDS, NICHD, NIDCD, NIMH, and NIDA.

NIH Roadmap Opportunities

The NIH Roadmap is a series of far-reaching initiatives designed to build on the progress in medical research achieved through the recent doubling of the NIH budget. The Roadmap focuses on three main areas: new pathways to discovery, research teams of the future, and re-engineering the clinical research enterprise.

Additional information on NIH Roadmap initiatives can be found on the NIH website at http://nihroadmap.nih.gov.

Looking to the Future

New and exciting programs are under development at the NIBIB. Up-to-date information on funding opportunities, workshops, and conferences can be found on the NIBIB website.

NIBIB Contacts

You may contact NIBIB program staff with your questions about funding opportunities or the application process. We welcome the opportunity to speak with potential applicants about the Institute's programs. Areas of scientific coverage for each member of the program staff can be found on the NIBIB website at: http://www.nibib.nih.gov/publicPage.cfm?pageID=2429.

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